

le Scienze

edizione italiana di Scientific American

The first juvenile dromaeosaurid (Dinosauria: Theropoda) from Arctic Alaska

Nome rivista: PLOS ONE
Numero: 15(7): e0235078
Data pubblicazione: 08/07/2020

Autori:

Nome: Alfio Alessandro
Cognome: Chiarenza
Affiliazione: Imperial College London & University College London, London, United Kingdom

Nome: Anthony R.
Cognome: Fiorillo
Affiliazione: Huffington Department of Earth Sciences, Southern Methodist University, Dallas, TX, United States of America

Nome: Ronald S.
Cognome: Tykoski
Affiliazione: Perot Museum of Nature and Science, Dallas, TX, United States of America

Nome: Paul J.
Cognome: McCarthy
Affiliazione: Department of Geosciences, University of Alaska, Fairbanks, AK, United States of America

Nome: Peter P.
Cognome: Flaig
Affiliazione: Jackson School of Geosciences, Bureau of Economic Geology, University of Texas at Austin, Austin, TX, United States of America

Nome: Dori L.
Cognome: Contreras
Affiliazione: Perot Museum of Nature and Science, Dallas, TX, United States of America

Abstract: Compared to the osteological record of herbivorous dinosaurs from the Late Cretaceous Prince Creek Formation of northern Alaska, there are relatively fewer remains of theropods. The theropod record from this unit is mostly comprised of isolated teeth, and the only non-dental remains known can be attributed to the troodontid cf. *Troodon* and the tyrannosaurid *Nanuqsaurus*. Thus far, the presence of members of Dromaeosauridae has been limited to isolated teeth. Here we describe a symphyseal portion of a small dentary with two ziphodont teeth. Based on tooth shape, denticle morphology, and the position of the Meckelian groove, we attribute this partial dentary to a saurornitholestine dromaeosaurid. The fibrous bone surface, small size, and higher number of mesial denticles compared to distal ones point to a juvenile growth stage for this individual. Multivariate comparison of theropod teeth morphospace by means of principal component analysis reveals an overlap between this dentary and Saurornitholestinae dromaeosaurid morphospace, a result supported by phylogenetic analyses. This is the first confirmed non-dental fossil specimen from a member of Dromaeosauridae in the Arctic, expanding on the role of Beringia as a dispersal route for this clade between Asia and North America. Furthermore, the juvenile nature of this individual adds to a growing body of data that suggests Cretaceous Arctic dinosaurs of Alaska did not undergo long-distance migration, but rather they were year-round residents of these paleopolar latitudes.

Ogni venerdì, nella tua casella di posta elettronica, segnalazioni e anticipazioni dal sito e dalle nostre iniziative editoriali

Iscriviti alla newsletter